

THE UNITED STATES OF AVIETIOA

TO ALL TO WHOM: THESE: PRESENTS SHALL COME:

Sunderman Arceding Inc.

THETERS, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY "N. & PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR IMPORTING IT, OR EXPORTING IT, ACCONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR CONDITIONING IT PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSE, OR USING IT IN PRODUCING A HYBRID OR

U.S.C. 2321 ET SEO.)

WARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. IN 2 STATES SEED OF THIS VARIETY (I) SHALL BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED VALUE CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT.



'Sunstar Pride'

In Testimonn Microsof, I have hereunto set my hand and caused the seal of the Mant Unsiety Asstection Office to be affixed at the City of Washington, D.C. this twenty-seventh day of April, in the year two thousand and four.

anderenan Secretary of Agriculture

PEPRODUCE LOCALLY. Include form number and date on a	ll reproductions.		FORM APPROVED - OMB NO. 0581-005		
U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE SCIENCE AND TECHNOLOGY DIVISION - PLANT VARIETY PROTECTION OFFICE APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE (Instructions and information collection burden statement on reverse)		The following statements are ma 1974 (5 U.S.C. 552a) and the Paj	The following statements are made in accordance with the Privacy Act o 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.		
		Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).			
NAME OF APPLICANT(S) (as it is to appear on the Certificate)		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME		
Sunderman Breeding Inc.	en e	SDM 204B-1	Sunstar Pride		
4 4000000 101	**				
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Court	ntry)	6. TELEPHONE (include area code)	FOR OFFICIAL USE ONLY		
3754 North 2700 East		208 733 0902	9800113		
Twin Falls ID 83301		6. FAX (include area code)	F DATE		
			1 02-17-1998		
7. GENUS AND SPECIES NAME	8. FAMILY NAME (Bota)	ical)	G FILING AND EXAMINATION FEE:		
Hordeum vulgare L.	-		£ = 2450.00		
9. CROP KIND NAME (Common name)			1.s PATE		
6-row Winter barley	_		R 2/5/98		
10. IF THE APPLICANT NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZA"	TION (corporation, partners)	ip, association, etc.) (Common name)	c CERTIFICATION FEE:		
Chapter S Corporation 11. IF INCORPORATED, GIVE STATE OF INCORPORATION		Transition in the second secon	I V		
Idaho		June 25, 1991	D 4/02/2004		
13. NAME AND ADDRESS OF APPLICANT REPRESENTATIVEIS), IF ANY, TO SERV	VE IN THIS APPLICATION	AND RECEIVE ALL PAPERS	14. TELEPHONE (include area code)		
Donald Sunderman Patsy Sunderman Breeding Inc.	lerman	perphone call MAH 3/15/2004			
3754 N 2700 E		1144 5/15/2004	208 733 0902		
Twin Falls ID 83301	•		15. FAX (include area code)		
16, CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow in	structions on reverse)				
a. Exhibit A. Origin and Breeding History of the Variety b. Exhibit B. Statement of Distinctness					
c. Exhibit C. Objective Description of the Variety					
d. SExhibit D. Additional Description of the Variety (Optional)			•		
e. 🔯 Exhibit E. Statement of the Besis of the Applicant's Ownership					
f. Voucher Sample (2,500 viable untreated seeds or, for tuber propagated	varieties verification that ti	ssue culture will be deposited and maintained	f in an anarovari oublic renovitory)		
g. ☐ Filing and Examination Fee (\$2,450), made payable to Treasurer of the	United States" (Mail to PV	PO)	an opproved public repusitory)		
7. Does the applicant specify that seed of this variety be sold by V			83(a) of the Plant Variety Protection Acti		
TX (EU) 103, answer Rents 16 and 19 below)	∐ NO (If "no," go t	o item 20)	The state of the s		
B. DOES THE APPLICANT SPECIFY THAT SEED OF THIS VARIETY BE LIMITED A GENERATIONS?	S TO NUMBER OF 19.	IF "YES" TO ITEM 18, WHICH CLASSES O	F PRODUCTION BEYOND BREEDER SEED?		
□ YES ☑ NO		☐ FOUNDATION ☐ REGISTERED			
D. HAS THE VARIETY OR A HYBRID PRODUCED FROM THE VARIETY BEEN RELE. **EXYES (If "yes," give names of countries and detes!					
X_KYES (If 'Yes," give names of countries and dates)	NO USA Aug	ust 1997 Foundati	on seed		
The applicant(s) declare that a viable sample of basic seed of the variety will be fi applicable, or for a tuber propagated variety a tissue culture will be deposited in	urnished with application an a public repository and main	d will be replenished upon request in accord	arice with such regulations as may be		
The undersigned applicant(s) is(are) the owner(s) of this servially reproduced or to	har propagated alone	4 N-B 4 N-4 A-4 1 1	frank surffaces and shalls as		
Section 42, and is entitled to protection under the provisions of Section 42 of the	Plant Variety Protection Ac	. and believels) trial trie variety is new, dist	inct, uniterm, and stable as required in		
Applicant(s) is(are) informed that false representation herein can jeopardize protec	tion and result in penalties.				
Donald Sunderman	SIGNATUR	E OF APPLICANT (Owner(s))			
ME (Ploase print or type)	NAME (2)	ce cont or type!			
Donald Sunderman	MANUE IPPEA	se print ar type)	• •		
PACITY OR TITLE DATE	CAPACITY	OR TITLE	DATE		
President 1/24/	798	, '			
D-470 (03-96) (Previous editions are to be destroyed)	!	(0)			

14 A Origin and breeding history of the variety

Sunstar Pride was selected from a cross of Eight-Twelve with Steptoe. The cross was made in the spring of 1987. The F₁ generation was grown in the greenhouse and the F₂ and F₃ generations planted in the spring of 1988 and 1989. In the fall of 1989, 1500 F₄ lines were planted near Aberdeen, Idaho and the hardiest ones selected for planting in the 1990-91 winter nursery. The selection, SDM 204 had outstanding yield, but had a few segregates for height and lax head type. In the 1992-3 crop year four hundred dense heads were selected. Three hundred of those were grown as head rows in the 1993-4 nursery. Those with the desired height, yield and test weight were bulked, which resulted in SDM 204B-1. Subsequent trials from the 1995-98 (4 years) have shown Sunstar Pride to be uniform and stable in all phenotypic characters? With No Vanants Present at that time.

14 B Novelty Statement

Sunstar Pride is most similar to Sunstar Double when both are grown as winter barley.

The major differences are:

- L Sunstar Pride has kernels with white aleurone while those of Sunstar Double have blue aleurone.
- 2. Sunstar Pride is a winter barley, whereas Sunstar Double has a facultative growth habit.
- 3. Sunstar Pride has averaged 5 days later in heading than Sunstar Double. It has been the latest maturing variety among those grown in the nursery.

Following are the differences and similarities in head and seed characteristics between Sunstar Pride and Sunstar Double:

Character	Sunstar Pride	Sunstar Double
Pearl	White	Blue
Beard	Rough	Rough
Rachilla hairs	Short	Short
Basil Mark	Transverse Crease	Depression
Lateral vein barbs	Few to none	Several
Glume Hair	Few	Covered
Head Type	6-row	6-row
Spike	Very dense	Dense

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE LIVESTOCK AND SEED DIVISION BELTSVILLE, MARYLAND 20705

EXHIBIT C (Barley)

A CARACTA A CARA OBJECTIVE DESCRIPTION OF VARIETY BARLEY (HORDEUM VULGARE)

INSTRUCTIONS: See Reverse. BARLEY (HORDEUM VULGARE)	
Sunderman Breeding Inc.	FOR OFFICIAL USE ONLY PYPO NUMBER
ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code)	9800113
3754 N 2700 E Twin Falls ID 83301	VARIETY NAME OR TEMPORARY DESIGNATION
Planet	Sunstar Pride
Place the appropriate number that describes the varietal character of this variety in the Place a zero in first box (i.e. 0 8 9 or 0 9) when number is either 99 or less or	boxes below. 9 or less.
1. GROWTH HABIT:	TO THE PROPERTY OF THE PROPERT
	1 - PROSTRATE 2 - SEMIPROSTRATE 7
2. MATURITY (50% Flowering):	
4 1 = EARLY (California Mariout) 2 = MIDSEASON (Betzes) 3 = LATE (Frontier)	4=Sprinter
No. of days Earlier than 1 = BETZES 2 = CALIFORNIA MARIOUT	3 - CONQUEST 4 - DICKSON
7 No. of days Later than 8 5 = PIROLINE 6 = PRIMUS 7 = UNITAN	8=Sunatar Double
3, PLANT HEIGHT (From soil level to top of head):	<u> </u>
3 1 = SEMIDWARF 2 = SHORT (California Marlout) 3 = MEDIUM TALL (Betzer)	4 - TALL (Conquest)
Cm. Shorter than 1 = BETZES 2 = CALIFORNIA MARIOUT	
1 0 Cm. Taller than 5 = PIROLINE 6 = PRIMUS 7 = UNITAN	8=Sinstar Double
4. STEM:	
1 = 0 - 3 cm. 2 = 3 - 10 cm. 2 Exertion (Flag to spike at maturity): 3 = 10 - 15 cm.	1 = ABSENT 2 = PRESENT
+ 6 NO. OF NODES (Originating from node above ground)	A CONTRACTOR OF THE SECOND
2 Callar Shape: 1 - CLOSED 2 - V-SHAPED 3 - OPEN 1 Shape of Neck:	1 = STRAIGHT 2 = SNAKY 3 = OTHER (Specify)
5. LEAF:	
Basal leaf sheath (seedling): 1 = GLABROUS 2 = PUBESCENT 2 Position of flag les	1 - DROOPING 2 - UPRIGHT
3-MAXT	First leaf below flag leaf)
CM. LENGTH (First leaf below flag leaf)	f sheath: 1 = ABSENT 2 = PRESENT
6. HEAD:	LAX: 2 = ERECT (Not dense)
	ERECT (Dense)
	ABSENT (Glossy) 2 - SLIGHTLY WAXY
1 - AIGNE O- ATTID	e): 1 = LACKING 2 = FEW 3 = COVERED
7. GLUME:	
2 Length: 1 = 1/3 OF LEMMA 2 = 1/2 OF LEMMA 1 Hairs: 1 = NONE	2 - SHORT 3 - LONG
Hair covering: 1 - NONE 2 - RESTRICTED TO MIDDLE 3 - CONFINED TO BAN	D 4 = COMPLETELY COVERED
	e total and property of the entire type of the total
Awn Surface: 1 = SMOOTH 2 = SEMISMOOTH 3 = ROUGH	THE STATE OF THE S
ORM LPGS-470-5 (8-80) (Replaces edition dated 4-78 which may be used)	V473113

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5 Awn: 1 = AWNLESS 2 = AWNLETS ON CENTRAL ROWS 3 = SHORT ON CENTRAL ROWS, AWNLETS ON LATE 5 = LONG (longer than spike) 6 = HOODED	RAL ROWS 4 = SHORT these trials added to lesign or spirits
Awn Surface: 1 = AWNLESS 2 = SMOOTH 3 = SEMISMOOTH	THE 4 - ROUGH
Teeth: 1 = ABSENT 2 = FEW 3 = NUMEROUS	Hair: 1 = ABSENT 2 = PRESENT
3 Shape of base: 1 = DEPRESSION 2 = SLIGHT CREASE 3 = TRANSVERSE CREASE	1 Rachilla Hairs: 1 = SHORT 2 = LONG
9. STIGMA:	
1 Hairs: 1 = FEW 2 = MANY	
10. SEED:	<u>. </u>
Type: 1 = NAKED 2 = COVERED	Hairs on Ventral Furrow: 1 = ABSENT 2 = PRESENT
Length: 1 = SHORT (8.0 mm.) 2 = SHORT TO MIDLONG (7.4 = MIDLONG TO LONG (9.0 - 10.5 mm.)	
4	3 = SEMIWRINKLED ** 4 = WRINKLED
1 Aleurone Color: 1 = COLORLESS (White or Yellow) 2 = 8LU	
0 1 PERCENT ABORTIVE	4 1 GMS. PER 1000 SEEDS
11. DISEASE: (0 = Not Tested, 1 = Susceptible, 2 = Resistant)	
SEPTORIA ONET BLOTCH	SPOT BLOTCH O POWDERY MILDEW
CO LOOSE SMUT DE BACTERIAL BLIGHT	COVERED SMUT - CORES. O FALSE LOOSE SMUT
STEM RUST Ø LEAF RUST	SCAB OTHER (Specify)
AY Ø BSMV	d bydy
12. INSECT: (0 = Not tested, 1 = Susceptible, 2 = Resistant)	·
0 GREEN BUG ENGLISH GRAIN APHID	0 CHINCH BUG 0 ARMYWORM
GRASS HOPPERS CERIAL LEAF BETTLE	OTHER (Specify)
(GP	B _{ARTON} Commence of the Following
HESSIAN FLY RACES	F G
13. CHEMICAL (0 = Not Tested, 1 = Susceptible, 2 = Resistant)	
a mura to a site	The second control of
OTHER (Specify)	A CONTRACTOR OF THE CONTRACTOR
14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT	SUBMITTED: SERVICE OF VARIETY
1 SIASE OF VARIETY	
	Seed size
The state of the s	Coleoptile elongation
Leaf size (1975) 200 T	Seedling pigmentation 11
Leaf color	
Leaf carriage 11	3000 III aminimum and
REFERENCES: The following publications may be used as a refere	ence aid for the standardization of character descriptions and

1. Wiebe, G. A., and D. A. Reid, 1961, Classification of Barley Varieties Grown in the United States and in 1958, Technical Bulletin No. 1224, U.S. Dept. of Agriculture.

2. Reid, D. A., and G. A. Wiebe, 1968, Barley: Origin, Botany, Culture, Winter Hardiness, Genetics, Utilization,

Pests, Agriculture Handbook No. 338, U.S. Dept. of Agriculture. pp. 61-84.

3. Malting Barley Improvement Association, Milwaukee, Wisconsin, 1971, Barley Variety Dictionary.

COLOR: Nickerson's or any recognized color fan may be used to determine color of the described variety.

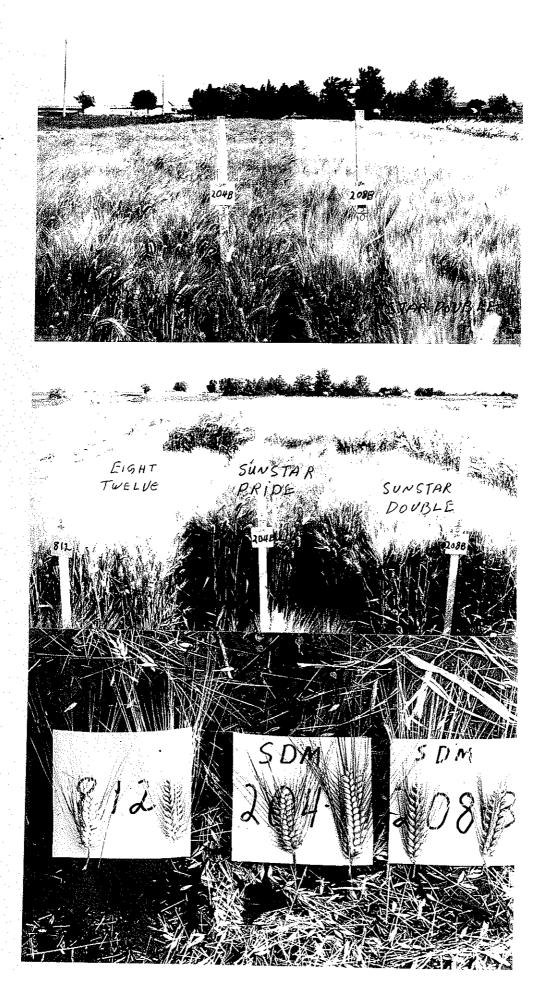
FORM LPGS-470-5 (8-80) (REVERSE)

14 C Objective description of the variety

Sunstar Pride is a moderately stiff strawed variety, intermediate in height and one of the latest maturing winter barley varieties. It has averaged 35 inches in height compared to 33 inches for Sunstar Double. Heads are 6-rowed, strap in shape and very dense. Kernels are midlong to long with white aluerone. The test weight of seed of Sunstar Pride has varied from 46.3 to 52.5 pounds per bushel when grown under irrigation, depending upon the year and irrigation schedule. See Figure 1 for photographic comparisons of Sunstar Pride, Sunstar Double and Eight – Twelve.

Figure 1 Photographic comparisons of Sunstar Pride, Sunstar Double and Eight-Twelve.

3800113



14 D Additional description of the variety

Sunstar Pride has had an average yield of 169.3 bushels per acre in the 3-year 3-station averages, when grown under irrigation in Southern Idaho (table 2). It has out-yielded the second highest yielding, Sprinter, by 17.4 bushels per acre. Sunstar Double in the same trials averaged 134.8 bushels per acre. The test weight averages of Sunstar Pride, Sunstar Double and Sprinter were 49.9, 50.7 and 52.4 pounds per bushel, respectively. Although Sprinter is not similar to Sunstar Pride, it was shown to demonstrate large yield superiority of Sunstar Pride over other varieties.

Larry Robertson, Agronomist

U.S. DEPARTMENT OF AGRICULTURE AGRICULTURAL MARKETING SERVICE	The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.		
EXHIBIT E STATEMENT OF THE BASIS OF OWNERSHIP	Application is required in order to de certificate is to be issued (7 U.S.C. 2- until certificate is issued (7 U.S.C. 2426	421). Information is held confidential	
1. NAME OF APPLICANT(S)	TEMPORARY DESIGNATION OR EXPERIMENTAL NUMBER	3. VARIETY NAME	
Sunderman Breeding Inc.	204B-1	Sunstar Pride	
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)	5. TELEPHONE (include area code)	6. FAX (include area code)	
3754 North 2700 East	208 733 0902		
Twin Falls ID 83301	7. PVPO NUMBER		
	9800113		
8. Does the applicant own all rights to the variety? Mark an "X" in approp	nate block. If no, please explain.	Y YES NO	
		CA VEC III NO	
9. Is the applicant (individual or company) a U.S. national or U.S. based of If no, give name of country		X YES NO	
10. Is the applicant the original owner? YES	O If no, please answer one of the f	ollowing:	
a. If original rights to variety were owned by individual(s), is (are) the o	riginal owner(s) a U.S. national(s)?	en e	
	NO If no, give name of country		
b. If original rights to variety were owned by a company(ies), is(are) the	e original owner(s) a U.S. based compan	y ? :	
YES !	NO If no, give name of country		
11. Additional explanation on ownership (if needed, use reverse for extra s	pacė):		
entre de la companya de la companya La companya de la co	C F SW		
PLEASE NOTE:			
Plant variety protection can be afforded only to owners (not licensees) who meet o	one of the following criteria:		
1. If the rights to the variety are owned by the original breeder, that person must which affords similar protection to nationals of the U.S. for the same genus and	oe a U.S. national, national of a UPOV members.	per country, or national of a country	

- 2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
- 3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definition.

According to the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to compete this information collection is estimated to average 10 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

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To file a complaint, write the Secretary of Agriculture, U.S. Department of Agriculture, Washington, D.C. 20250, or call 1-800-245-6340 (voice) or (202) 720-1127 (TDD), USDA is an equal employment opportunity employer.

14 E Statement of basis of applicants ownership

The variety, 'Sunstar Pride', for which plant variety protection is hereby sought, was selected from progeny of a cross made by Donald Sunderman. Development and testing was carried out by him or under his supervision. All rights to the variety are assigned to Sunderman Breeding Inc.